

## **REMARKS**

The specification has been amended to correct errors only, no new subject matter has been added. In addition, the title and the abstract have been amended per request by the Examiner. Claims 1, 7-28, 31-35, 37-63, 65-67, 69-75, 77-108, 110-256, 308-311, and 313-350 have been amended, claims 2-6, 29, 30, 36, 64, 68, 76, 109, 257-271, 273-308, and 310-312 have been canceled, and claims 351-392 have been added. As such, claims 1, 7-28, 31-35, 37-63, 65-67, 69-75, 77-108, 110-256, 272, 309, and 313-392 are currently pending in the case. Further examination and reconsideration of the presently claimed application are respectfully requested.

### **Objection to the Title**

The Title was objected to for not being descriptive to the elected invention. To expedite prosecution, the Title has been amended in a manner which is believed to address the concerns expressed in the Office Action. Accordingly, removal of this objection is respectfully requested.

### **Objections to the Abstract**

The Abstract was objected to for failing to describe the complete subject matter of the disclosure. To expedite prosecution, the Abstract has been amended in a manner which is believed to address the concerns expressed in the Office Action. Accordingly, removal of this objection is respectfully requested.

### **Objections to the Specification**

The Specification was objected to for containing hyperlinks. The Examiner's thorough review of the specification is appreciated. As noted above, the specification has been amended to remove all hyperlinks as well as to correct typographical and grammatical errors. Removal of this objection is respectfully requested.

### **Objection to Information Disclosure Statements**

The IDS filed on 12/16/04 was objected to because all of the non-patent references were improperly cited. The IDS filed on 11/23/04 was objected to because some (but not all) of the non-patent references were improperly cited and the list of published US patents and patent applications fail to state the names of the first listed inventors. In addition, a copy of one of the non-patent references cited in the IDS filed 11/23/04 was deemed illegible by the Examiner and, therefore, was not considered. The Examiner's thorough review of the IDS's is appreciated. In response thereto, a new IDS properly citing the published US patents and patent applications included in the IDS filed on 11/23/04 is filed concurrently with this response. Applicant is diligently working on compiling the information to properly cite the non-patent references included in the IDS's filed on 11/23/04 and 12/16/04 and will file them in a new IDS in due course. Removal of the objection to the IDS's is respectfully requested.

### **Objection to the Claims**

Claims 9, 181, 182, and 320 were objected to for reciting non-elected subject matter and claims 252, 275, and 289 were objected to for informalities. The Examiner's thorough review of the claims is appreciated. Claims 275 and 289 have been canceled and, thus, their objections are moot. To expedite prosecution, claims 9, 181, 182, and 320 have been withdrawn and claim 252 has been amended in a manner commensurate with the suggestion made in the Office Action. Accordingly, removal of the objections to claims 9, 181, 182, 252, 275, 289, and 320 is respectfully requested.

### **Lack of Acknowledgement of Previously Added Claims**

Claims 322-350 were added in a preliminary amendment filed October 23, 2003 for the captioned case. The claims appear to have been overlooked during prosecution of the case, namely with respect to the restriction requirement mailed June 20, 2005, the response to the restriction requirement filed October 17, 2005, and the present Office Action. Claims 322-350 are included in the list of claims outlined above, noting whether they are "Currently Amended"

(and, therefore, need to be considered for examination) or “Withdrawn – Currently Amended” (i.e., withdrawn per the restriction requirement of June 20, 2005). Consideration of claims 322-350 is respectfully requested.

### **Section 101 Rejection**

Claims 1-6, 8-10, 64, 67, 68, 72-76, 79-83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 251, 252, 269-271, 275-278, 282-285, 289-292, 296, 312, 319, and 320 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 and 185-195 of US Application 10/855,344. As noted above, claims 2-6, 29, 30, 36, 64, 68, 76, 109, 257-271, 273-307, and 312 have been canceled and, thus, their provisional rejection is moot. As set forth in more detail below, the 35 U.S.C. § 101 provisional rejection of the remaining claims is traversed.

US Application 10/855,344 (published as US 2004/0238940 on 12/2/04) does not teach or suggest, much less claim coatings including biomolecules or specific amino acid sequences as purported by the Examiner on pages 5 and 6 of the Office Action. Rather, US Application 10/855,344 discloses an electronic device comprising an electronic component mounted for the purpose of static shielding (see Abstract of US Application 10/855,344). There is no mention of the electronic component including coatings having biomolecules or specific amino acid sequences. Consequently, it is asserted that US Application 10/855,344 does not claim or disclose embodiments that fall within the scope of the presently claimed case and, consequently, the claims of the present case are patentably distinct over US Application 10/855,344. Moreover, US Application 10/855,344 does not include claims 185-195 as purported by the Examiner. In particular, upon review of the application’s status on the public PAIR system, the most recent correspondence (i.e., a Final Office Action mailed 5/4/06) indicates only claims 1-14 are pending in the case. Furthermore, US Application 10/855,344 was filed May 28, 2004 subsequent to the filing date of September 4, 2003 of the captioned case as well as subsequent to the priority date of September 9, 2002 of the captioned case. Consequently, even if the presently claimed case was not patentably distinct from the claims of US Application 10/855,344 (for the sake of argument), there is no term for the captioned case to disclaim relative to US Application

10/855,344 if such applications issue as patents. Accordingly, the 35 U.S.C. § 101 provisional rejection of claims 1-6, 8-10, 64, 67, 68, 72-76, 79-83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 251, 252, 269-271, 275-278, 282-285, 289-292, 296, 312, 319, and 320 is traversed and, consequently, removal of the provisional rejection is requested.

#### **Section 112, 2nd Paragraph, Rejection**

Claims 1-6, 8-10, 64, 67, 68, 72-76, 79-83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 251, 252, 269-271, 275-278, 282-285, 289-292, 296, 312, 319, and 320 were rejected under 35 U.S.C. § 112, second paragraph, for being indefinite.

In particular, the Examiner states the term “active biomolecule” in claims 1, 269, 275-277, 282, 283, 289, 291, 296, 312, and 319 renders the claims indefinite because the definition for the term in specification is only exemplary. The other claims that have been rejected under 35 U.S.C. § 112, second paragraph have been deemed indefinite as well for being dependent upon rejected independent claims 1 and 319. To expedite prosecution, claims 1 and 319 as well as all other claims containing the term “active biomolecule” have been amended to remove the term. As noted above, claims 269, 275-277, 282, 283, 289, 291, 296, and 312 as well as several other claims have been canceled and, thus, their rejection is moot. Since the remaining dependent claims that have been rejected under 35 U.S.C. § 112, second paragraph are dependent upon claims 1 and 319, such claims are definite for at least the same reasons claims 1 and 319.

In addition, the Examiner states the specification of “a combination thereof” renders claims 5, 8, and 9 indefinite. To expedite prosecution, claims 8 and 9 have been amended to remove the limitation of “a combination thereof” and claim 5 has been canceled.

The Examiner deemed the term “contacts a living organism” in claim 64 confusing and, therefore, indefinite. To expedite prosecution, claim 64 has been canceled.

Claims 74, 75, and 83 were deemed indefinite for not defining whether the thickness of the coating is when the coating is wet, dry, or both wet and dry. To expedite prosecution, claims 74, 75, and 83 were amended to specify the thickness of the coating when it is wet and dry.

The term “ambient conditions” in claim 89 was deemed a relative term, rendering the claim indefinite. To expedite prosecution, claim 89 has been amended to specify that film formation occurs at a temperature between approximately -10 °C and approximately 40 °C. Support in the specification defining such temperature range as “ambient conditions” may be found, for example, on page 131, lines 1-3. It is believed that such amendments address the concerns expressed in the Office Action, particularly that such amendments provide a standard for ascertaining the requisite degree of the claim and one of ordinary skill in the art would be apprised of the scope of the claim.

The Examiner renders claim 105 indefinite for including the phrase, “a concentration that is insufficient to produce a solid”. In particular, the Examiner deems the phrase relative and states a person of ordinary skill in the art would not know the metes and bounds of such a recitation. Such conjecture is traversed. Contrary to the statements made in the Office Action, the specification does provide exemplary manners in which to induce a coating component to have a concentration that is insufficient to produce a solid film. “Such a non-film forming coating may be prepared, for example, by increasing the non-volatile component in a thermoplastic coating (e.g., increasing plasticizer content in a liquid component), reducing the amount of a coating component that contributes to the film formation chemical reaction (e.g., a binder, a catalyst) ...” (page 133, lines 5-9 of the Specification). It is asserted one skilled in the art of fabricating coatings would be apprised of component concentrations which would yield non-forming films and, as such, claim 105 is definite.

Claim 109 was deemed indefinite for the same reasons as claim 105. Although claim 109 did not include the phrase “a concentration that is insufficient to produce a solid”, the claim has been canceled in order to expedite prosecution of the present case.

Claim 110 was deemed indefinite for being dependent on itself and claims 111 and 112 were deemed indefinite for being dependent on indefinite claim 110. In response thereto, claim 110 has been amended to change its dependency to claim 1.

The term “temporary” in claims 110-112 and the term “poor” in claim 112 were deemed relative by the Examiner, rendering claims 110-112 indefinite. To expedite prosecution, claims 110-112 have been amended to specify that a temporary film lasts upon a surface for a time period between approximately 1 second and approximately 6 months and is susceptible to wear due to elemental exposure. Support for such amendments may be found, for example, in paragraph [0274] of the specification. The term “poor” has been removed from the claims. It is believed that such amendments address the concerns expressed in the Office Action, particularly that such amendments provide a standard for ascertaining the requisite degree of the claims and one of ordinary skill in the art would be apprised of the scope of the claims.

Claims 73, 75, 252, 276, 278, 282-285, 289-292, and 320 were deemed indefinite for having improper antecedent usage. The Examiner’s thorough review of the claims is appreciated. In response thereto, claims 73, 75, 252, and 320 have been amended to correct the improper antecedent usage noted in the Office Action. As noted above, 276, 278, 282-285, and 289-292 have been canceled and, thus their rejection is moot.

For at least the reasons noted above, pending and non-withdrawn claims 1, 8-10, 67, 72-75, 79-83, 88, 89, 94-97, 103, 105, 110-112, 126-131, 180-182, 217, 251, 252, 312, 319 and 320 are definite. Claims 2-6, 64, 68, 76, 109, 269-271, 275-278, 282-285, 289-292, 296, and 312 have been canceled and, thus, their rejections are moot. Accordingly, removal of the 112, 2<sup>nd</sup> paragraph rejection of claims 1-6, 8-10, 64, 67, 68, 72-76, 79-83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 251, 252, 269-271, 275-278, 282-285, 289-292, 296, 312, 319, and 320 is requested.

## **Section 112, 1st Paragraph, Rejections**

Claims 1-6, 8-10, 64, 67, 68, 72-76, 79-83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 251, 252, 269-271, 275-278, 282-285, 289-292, 296, 312, 319, and 320 were rejected under 35 U.S.C. § 112, first paragraph for the specification failing to provide enablement for the subject matter of the claims. In addition, such claims were further rejected under 35 U.S.C. § 112, first paragraph for containing subject matter which was not described in the specification in such a way to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention.

To expedite prosecution, the claims of the present case have been amended and, therefore, the scope of the claims has changed. In particular, independent claim 1 recites: “A paint comprising a proteinaceous material which is configured to bind to a chemical that is toxic to humans.” In addition, independent claim 319 is directed at a surface treatment having a proteinaceous material with the same configuration as claim 1 and which is further configured to “exhibit said binding activity in the surface treatment at one or more instances after the surface treatment has been formed with the proteinaceous material for greater than approximately 1 week”. Support for the amendments to claims 1 and 319 may be found, for example, in lines 1-8 of paragraph [0022] and lines 7-10 of paragraph [0031] of the specification. Accordingly, independent claims 1 and 319 are no longer directed to “any coating, having any composition, and containing any active biomolecule”, as contended by the Examiner for the originally filed claims.

As noted on page 11 of the Office Action, the specification is enabling for “a paint comprising enzymatically active organophospho hydrolase, as disclosed in Examples 3-5”. The Examiner’s recognition of enablement for such subject matter within the specification is appreciated, but it is asserted that the specification enables a broader spectrum of coatings, particularly those including but not necessarily restricted to the limitations recited in amended independent claims 1 and 319. In particular, the specification clearly outlines that different coating configurations may incorporate the biomolecule composition disclosed therein. More specifically, the specification repeatedly states that alternatives to the preferred embodiment of

paint may incorporate the biomolecule composition disclosed therein; namely clear coatings, waxes, fillers, adhesives, elastomers, sealants, and textile applications (See, e.g., the last 2 lines of paragraph [0020], paragraphs [0101]-[0107], and Examples 13-17). As such, it is asserted that the specification enables one skilled in the art to make and use several types of coatings for the invention and, therefore, the specification is not limited to enablement of paint alone as purported by the Examiner. In addition, such disclosure within the specification clearly conveys to one skilled in the art that the inventors had possession of the claimed subject matter, specifically with regard to several types of coatings having the biomolecule described therein and, therefore, the written description requirement is asserted to be satisfied for several types of coatings.

Furthermore, lines 1-5 in paragraph [0031] of the specification recites: “In certain embodiments, the active biomolecule comprises a proteinaceous molecule. In some aspects, a proteinaceous molecule comprises a peptide, a polypeptide, a protein, or a combination thereof. In specific aspects, the proteinaceous molecule comprises an enzyme, an antibody, a receptor, a transport protein, a structural protein, or a combination thereof.” As such, the specification is not necessarily limited to enzymatic activity as purported by the Examiner. Further support to enable one skilled in the art that the claimed subject matter may include a variety of proteinaceous molecule configurations may be found, for example, in lines 7-10 of paragraph [0113]. Moreover, the specification clearly states the biomolecule composition disclosed therein may be used to bind to a chemical that is toxic to humans. “In particular aspects, the proteinaceous molecule binds a ligand ... In certain preferred facets, the ligand comprises a chemical toxic to humans, such as, for example, an organophosphorus compound.”, (lines 7-11 of paragraph [0031]). It is noted that reference to the chemical toxic being an organophosphorus compound is exemplary and, therefore, the scope of the claimed subject matter is not necessarily so limited. In particular, it is asserted that one skilled in the art would be enabled by such disclosure in the specification to make and use the biomolecule composition disclosed therein to detoxify a variety of chemicals toxic to humans. Consequently, it is asserted that the specification is not limited to enablement of enzymatic activity of organophosphorus hydrolase as purported by the Examiner. In addition, such disclosure within the specification clearly conveys to one skilled in the art that the inventors had possession of the claimed subject matter,

specifically with regard to the biomolecule described therein being selected from different types of proteinaceous molecules which, in turn, are configured to generally bind to a toxic chemical. Consequently, the enablement and written description requirements are asserted to be satisfied.

### **Section 102 Rejection**

Claims 1-5, 8-10, 64, 67, 68, 72, 76, 88, 89, 94-97, 110, 126, 128, 180-182, 217, 269-271, 282-285, 296, 319, and 320 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,879,440 to Sau (hereinafter referred to as “Sau”). Claims 1-5, 8-10, 64, 67, 68, 72, 76, 88, 89, 94-97, 110, 126, 180-182, 217, 269-271, 282-285, 296, 319, and 320 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,998,200 to Bonaventura et al. (hereinafter referred to as “Bonaventura”). Claims 1-6, 8-10, 64, 67, 68, 72-75, 79, 80, 82, 83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 252, 269-271, 282-285, 296, 312, 319, and 320 were rejected under 35 U.S.C. § 102(b) as being anticipated by a paper entitled “*Alteromonas* prolidase for organophosphorus G-agent decontamination”, published in *Chemico-Biological Interactions*, and written by Cheng et al. (hereinafter referred to as “Cheng”). As noted above, claims 2-6, 64, 68, 76, 109, 269-271, 282-285, 296, and 312 have been canceled and, thus, their rejections are moot. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), MPEP 2131. None of Sau, Bonaventura, and Cheng disclose all limitations of claims 1, 8-10, 67, 72-75, 79, 80, 82, 83, 88, 89, 94-97, 103, 105, 110-112, 126-131, 180-182, 217, 252, 319, and 320, some distinctive limitations of which are set forth in more detail below.

**None of Sau, Bonaventura, and Cheng discloses a paint which is configured to bind to a chemical that is toxic to humans.** Amended independent claim 1 recites, “A paint comprising a proteinaceous material which is configured to bind to a chemical that is toxic to humans.” Amended independent claim 319 includes similar limitations for a surface treatment. Support for the amendments to claims 1 and 319 may be found, for example, in lines 7-10 of paragraph [0031] of the specification. There is no teaching or suggestion within Sau of the paints described therein containing enzymes configured to bind to ligands, much less to a chemical that is toxic to humans.

Consequently, Sau does not anticipate the limitations of claims 1 and 319. Furthermore, as noted in the Abstract, Sau teaches “Water-borne paints containing reduced-molecular weight polysaccharide derivatives that are resistant to enzyme hydrolysis.” (underline added for emphasis). In particular, Sau teaches hydrolyzing polysaccharide derivatives to break them into components and then mixing the hydrolyzed components with paint to minimize enzymatic activity within the paint and in effect minimize viscosity loss during storage of the paint. As such, Sau teaches away from a paint having molecules which are configured to bind to other chemicals. Consequently, there is no motivation to modify Sau to teach the limitations of claims 1 and 319.

Bonaventura teaches a manner of preventing fouling of an aquatic apparatus by an organism through affixing a biologically active chemical to the surface of the apparatus intended for contact with the aquatic environment. As noted in the Abstract of Bonaventura, the biologically active chemical is specifically configured to hinder the attachment of the organism to the surface (underline added for emphasis). Consequently Bonaventura fails to teach or suggest the paints described therein contain enzymes which are configured to bind to ligands, much less to a chemical that is toxic to humans. Consequently, Bonaventura does not anticipate the limitations of claims 1 and 319 nor is there any motivation to modify Bonaventura to create a paint with such limitations.

Contrary to Sau and Bonaventura, Cheng teaches enzymes which are configured to bind to chemicals that are toxic to humans, specifically organophosphorus compounds. Cheng, however, fails to disclose incorporating such enzymes within a paint. As such, Cheng fails to anticipate the limitations of claim 1. Although Cheng teaches incorporating the enzymes within a variety of substances other than paint (see Table 2), none of such substances are even remotely similar in composition or consistency to paint and, therefore, it would not be obviousness to one skilled in the art to incorporate such enzymes within a paint.

**None of Sau, Bonaventura, and Cheng discloses a surface treatment which is configured to bind to a chemical that is toxic to humans and is further configured to exhibit said binding activity in the surface treatment at one or more instances after the surface treatment has been formed with the proteinaceous material for greater than approximately 1 week.** Amended independent claim 319 recites: “[a] surface treatment comprising a

proteinaceous material which is configured to bind to a chemical that is toxic to humans and is further configured to exhibit said binding activity in the surface treatment at one or more instances after the surface treatment has been formed with the proteinaceous material for greater than approximately 1 week.” Support for the amendments to claim 319 may be found, for example, in lines 1-8 of paragraph [0022] and lines 7-10 of paragraph [0031] of the specification. As noted above, neither Sau nor Bonaventura teach, suggest, or provide motivation to modify the paints described therein to be configured to bind to ligands, much less to a chemical that is toxic to humans. Furthermore, neither Sau nor Bonaventura teach or suggest a period of time enzymatic activity within the paints may be retained with respect to binding to a chemical that is toxic to humans. Consequently, Sau and Bonaventura do not anticipate the limitations of claim 319 nor can claim 319 be rendered obviousness in view of Sau and/or Bonaventura.

As noted above, Cheng teaches incorporating enzymes which are configured to bind to toxic chemicals into a variety of substances. However, there is no teaching or suggestion within Cheng that the enzymes are configured to exhibit binding activity in the substances at one or more instances after the substances have been formed with the proteinaceous material for greater than approximately 1 week. Rather, Cheng only teaches analyzing enzyme activity within the substances for a 24 hour period. Such a short term analysis suggests that substances including the enzyme described therein are intended for near immediate use and, therefore, there is no desire to mix the enzyme with substances for long term enzyme activity, such as greater than approximately 1 week. In addition, Cheng teaches that the enzymatic activity within the substances described therein is significantly reduced (up to 50%) after a 24 hour period (*see* Fig. 3 and the first partial paragraph on page 461 of Cheng). As such, there is no teaching within Cheng that the incorporation of the enzymes taught therein are sufficiently configured to exhibit binding activity for an extended period of time, such as greater than 1 week. Consequently, it would not be obvious for one skilled in the art to employ the enzyme-incorporated substances described in Cheng to detoxify hazardous chemicals after the substances have been formed longer than 1 week.

For at least the reasons stated above, none of Sau, Bonaventura, and Cheng anticipates the limitations of claims 1 and 319. In addition, none of Sau, Bonaventura, and Cheng provides motivation to render the limitations of claims 1 and 319 obvious. Consequently, claims 1 and 319 are patentably distinct over Sau, Bonaventura, and Cheng. For at least the same reasons as those claims, it is asserted that dependent claims 8-10, 67, 72-75, 79, 80, 82, 83, 88, 89, 94-97, 103, 105, 110-112, 126-131, 180-182, 217, 252, and 320 are patentably distinct from Sau, Bonaventura, and Cheng as well. As noted above, claims 2-6, 64, 68, 76, 109, 269-271, 282-285, 296, and 312 have been canceled and, thus, their rejections are moot. Accordingly, removal of 102(b) rejections of claims 1-6, 8-10, 64, 67, 68, 72-76, 79, 80, 82, 83, 88, 89, 94-97, 103, 105, 109-112, 126-131, 180-182, 217, 269-271, 282-285, 296, 312, 319, and 320 is respectfully requested.

### **Section 103 Rejection**

Claims 81 and 251 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sau, Bonaventura, or Cheng in view of pages 6, 12-19, 127, 165, and 288-290 of *Paints, Coatings, and Solvents, Second Completely Revised Edition* by Stoye et al. (hereinafter referred to as "Stoye"). Claims 275-278 and 289-292 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sau, Bonaventura, or Cheng in view of Chapter 16 of *Current Protocols in Molecular Biology* by Ausubel et al. (hereinafter referred to as "Ausubel"). As noted above, claims 275-278 and 289-292 have been canceled and, thus, their rejection is moot. To establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). None of the cited art teaches or suggests all limitations of claims 81 and 251, some distinctive limitations of which are set forth in more detail below.

**No combination of the cited art teaches or suggests a paint that is configured to bind to a chemical that is toxic to humans.** These are the limitations recited above for claim 1. As noted above, none of Sau, Bonaventura, and Cheng teaches, suggests, or provides motivation to

teach the limitations of independent claim 1. Furthermore, neither Stoye nor Ausubel teach or suggest paints with proteinaceous molecules configured to bind to toxic chemicals. As such, neither Stoye nor Asubel can be used to overcome the deficiencies of Sau, Bonaventura, and Cheng to teach the limitations of claim 1. Since claims 81 and 251 are dependent from claim 1, claims 81 and 251 are patentably distinct over the cited art for at least the same reasons as that claim. As noted above, claims 275-278 and 289-292 have been canceled and, thus, their rejection is moot. Accordingly, removal of the § 103(a) rejections of claims 81, 251, 275-278 and 289-292 is respectfully requested.

**Patentability of Added Claims**

The present amendment adds claims 351-392. Support for the limitations of added claims 351-392 may be found, for example, on page 19-47 of the specification. Added claims 351-392 are included in the list of claims outlined above, noting whether they are “Currently Amended” (and, therefore, need to be considered for examination) or “Withdrawn – Currently Amended” (i.e., withdrawn per the restriction requirement of June 20, 2005). Added independent claim 368 is directed at a coating including limitations similar to those recited for the surface treatment in independent claim 319. Consequently, support for the limitations of claim 368 may be similar to those supporting claim 319, such as but not limited to lines 1-8 of paragraph [0022] and lines 7-10 of paragraph [0031] of the specification. Furthermore, for at least the reasons cited above regarding the patentability of claim 319 over the cited art, independent claim 368 is asserted to be patentably distinct over the cited art. Since claims 351-367 and 369-392 are dependent upon claims 1, 319, and 369, claims 351-367 and 369-392 are patentably distinct over the cited art for at least the same reasons as those claims. Accordingly, consideration and approval of added claims 351-392 is respectfully requested.

## CONCLUSION

This response constitutes a complete response to all of the issues raised in the Office Action dated January 12, 2006. In view of the remarks traversing the rejections in the Office Action, Applicants assert that pending claims 1, 7-28, 31-35, 37-63, 65-67, 69-75, 77-108, 110-256, 272, 309, and 313-392 are in condition for allowance. If the Examiner has any questions, comments, or suggestions, the undersigned earnestly requests a telephone conference.

## PETITION UNDER 37 C.F.R. § 1.136 FOR EXTENSION OF TIME

Applicant respectfully petitions the Commissioner for a three month extension of time under 37 C.F.R. § 1.136 for responding to the Office Action mailed January 12, 2006.

The Commissioner is authorized to charge any fees which may be required, or credit any overpayment, to deposit account no. 50-1085.

Respectfully submitted,  
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Date: July 12, 2006